

AMENDMENTS TO THE CLAIMS

1-31. (Cancelled)

32. (Currently Amended) A ~~sensor~~composition, comprising:

a compound having a structure:



comprising an organic moiety, ~~Q~~ comprising ~~being one of nitrogen or oxygen, and Y~~
being one of H or SiR₃, each R independently being one of hydrogen, alkyl, or aryl ~~and an~~
~~organic moiety,~~

wherein at least a portion of the compound is able to ~~eyelize~~ undergo an
intramolecular cyclization reaction upon reaction of the compound with an electrophile to
form a cyclized product;

a source of energy applicable to the compound to cause an emission of radiation; and
an emission detector positioned to detect the emission ~~able to transform OY into an~~
~~alkylating agent.~~

33. (Currently Amended) The ~~sensor~~composition of claim 32, wherein the electrophile comprises a phosphate ester.


34. (Currently Amended) The ~~sensor~~composition of claim 32, wherein the electrophile comprises an electrophilic phosphorous, sulfur, or arsenic atom.

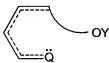
35. (Currently Amended) The ~~sensor~~composition of claim 34, wherein the electrophilic phosphorous, sulfur, or arsenic atom is bonded to more than one electron-withdrawing moiety.



36. (Currently Amended) The ~~sensor~~composition of claim 32, wherein the electrophile comprises an electrophilic carbon that is multiply-bonded another electrophilic atom.
37. (Currently Amended) The ~~sensor~~composition of claim 32, wherein the electrophile is a chemical warfare agent.
38. (Currently Amended) The ~~sensor~~composition of claim 32, wherein \ddot{O} is nitrogen.
39. (Withdrawn; Currently Amended) The ~~sensor~~composition of claim 32, wherein \ddot{O} is oxygen.
40. (Withdrawn; Currently Amended) The ~~sensor~~composition of claim 32, wherein the compound is a polymer.
41. (Currently Amended) The ~~sensor~~composition of claim 32, wherein a shortest bond path between O and \ddot{O} has at least 5 atoms.
42. (Currently Amended) The ~~sensor~~composition of claim 41, wherein a shortest bond path between O and \ddot{O} has exactly 5 atoms.
43. (Currently Amended) The ~~sensor~~composition of claim 32, wherein the compound is able to cyclize upon reaction of the compound with the electrophile to produce a product having a structure:



44. (Currently Amended) The ~~sensor~~composition of claim 32, wherein  comprises at least one conjugated group.

45. (Currently Amended) The sensorecomposition of claim 32, wherein  has a structure:




wherein the structure  comprises at least one conjugated group, and  comprises at least one carbon atom.

46. (Currently Amended) The sensorecomposition of claim 45, wherein  comprises a structure:



47. (Currently Amended) The sensorecomposition of claim 45, wherein  consists of a structure:

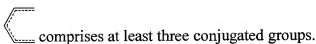


48. (Currently Amended) The sensorecomposition of claim 45, wherein the structure  comprises at least two conjugated groups.

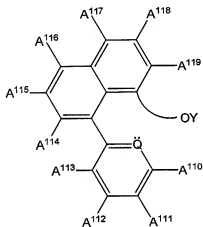
49. (Currently Amended) The sensorecomposition of claim 48, wherein the two conjugated groups are not conjugated with each other.

50. (Withdrawn; Currently Amended) The sensorecomposition of claim 48, wherein the two conjugated groups are phenolic groups.

51. (Withdrawn; Currently Amended) The sensor composition of claim 48, wherein the structure

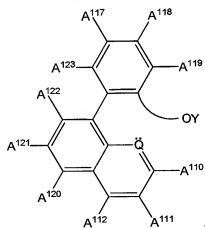


52. (Currently Amended) The sensor composition of claim 45, wherein the compound comprises a structure:



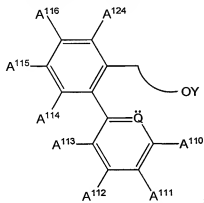
wherein at least one or more of A¹¹⁰, A¹¹¹, A¹¹², A¹¹³, A¹¹⁴, A¹¹⁵, A¹¹⁶, A¹¹⁷, A¹¹⁸, and A¹¹⁹ is one of hydrogen, an organic moiety, or a polymer.

53. (Withdrawn; Currently Amended) The sensor composition of claim 45, wherein the compound comprises a structure:



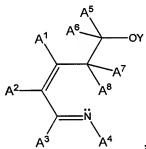
wherein at least one or more of A¹¹⁰, A¹¹¹, A¹¹², A¹¹⁷, A¹¹⁸, A¹¹⁹, A¹²⁰, A¹²¹, A¹²², and A¹²³ is one of hydrogen, an organic moiety, or a polymer.

54. (Withdrawn; Currently Amended) The ~~sensor composition~~ of claim 45, wherein the compound comprises a structure:



wherein at least one or more of A¹¹⁰, A¹¹¹, A¹¹², A¹¹³, A¹¹⁴, A¹¹⁵, A¹¹⁶ and A¹²⁴ is one of hydrogen, an organic moiety, or a polymer.

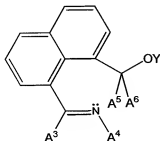
55. (Currently Amended) The ~~sensor composition~~ of claim 32, wherein the compound has a structure:



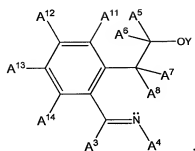
wherein at least one or more of A¹, A², A³, A⁴, A⁵, A⁶, A⁷, and A⁸ comprises at least one conjugated group.

56. (Currently Amended) The ~~sensor composition~~ of claim 55, wherein each of A⁵, A⁶, A⁷, and A⁸ independently is hydrogen.

57. (Currently Amended) The ~~sensorecomposition~~ of claim 55, wherein the compound has a structure:



58. (Currently Amended) The ~~sensorecomposition~~ of claim 57, wherein each of A⁵ and A⁶ independently is hydrogen.
59. (Currently Amended) The ~~sensorecomposition~~ of claim 57, wherein A³ and A⁴ together comprise a conjugated group.
60. (Currently Amended) The ~~sensorecomposition~~ of claim 59, wherein the conjugated group is cyclic.
61. (Currently Amended) The ~~sensorecomposition~~ of claim 60, wherein the conjugated group is aromatic.
62. (Currently Amended) The ~~sensorecomposition~~ of claim 55, wherein A¹ and A² together comprise a conjugated group.
63. (Currently Amended) The ~~sensorecomposition~~ of claim 62, wherein the conjugated group is cyclic.
64. (Currently Amended) The ~~sensorecomposition~~ of claim 55, wherein the compound has a structure:

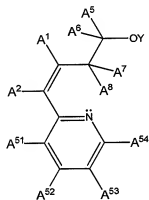


wherein each of A^{11} , A^{12} , A^{13} , and A^{14} independently comprise at least one atom.

65. (Currently Amended) The ~~sensor~~composition of claim 64, wherein at least one of A^{11} , A^{12} , A^{13} , and A^{14} comprises a conjugated group.

66-80. (Cancelled)

81. (Currently Amended) The ~~sensor~~composition of claim 55, wherein the compound has a structure:



wherein each of A^{51} , A^{52} , A^{53} , and A^{54} independently comprise at least one atom.

82-126. (Cancelled)

127. (Original) A method, comprising:

reacting a compound with an electrophile to produce a product having greater

emissivity than the compound, wherein the product comprises at least a portion of the compound that has been cyclized upon reaction with the electrophile.

128. (Original) A method, comprising:

cyclizing at least a portion of a compound by reacting the compound with an electrophile, the compound having a structure:



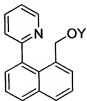
comprising an organic moiety, Q being one of nitrogen or oxygen, and Y being one of H, an alkyl group, an alkoxy group, and SiR₃, each R independently being one of hydrogen and an organic moiety.

129-135. (Cancelled)

136. (New) The sensor of claim 32, wherein the intramolecular cyclization reaction comprises an intramolecular nucleophilic substitution reaction.

137. (New) The sensor of claim 32, wherein the cyclized product has a greater emissivity than the compound.

138. (New) The sensor of claim 32, wherein the compound has the following structure,



139. (New) The sensor of claim 32, wherein the electrophile is sarin, phosgene, soman, tabun, thionyl chloride,

